LTC / jva 10 / 29 / 2002

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on policies and practices for advanced metering, demand response, and dynamic pricing.	Rulemaking 02-06-001

ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENT ON VISION STATEMENT

I. Summary

This ruling follows the third meeting[1] of Working Group (WG) 1, the interagency policy-setting group comprised of commissioners and staff from the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), and the California Consumer Power and Conservation Financing Authority (CPA). A representative of the California Independent System Operator (ISO) also attended this meeting and actively participated from the dais.

Through this ruling, we solicit written comments from the parties on the draft interagency vision statement presented at the meeting. We believe the parties can assist WG 1 as it further refines the vision statement.

[1] The third meeting of WG 1 was held on October 15, 2002, in San Francisco. The agenda for this meeting, which was published on the CPUC website prior to the meeting, is attached to this Ruling as Item 1.

II. California Demand Response: A Vision for the Future

At the last meeting the staff reported that it continues to refine the draft interagency vision statement. There was some discussion by WG 1 principals and staff[2] about whether the document should be modified to include other points, such as the need to place demand response in an overall resource portfolio context; the need to be sensitive to business shifting production out of state in response to demand response impacts; the need to be sensitive to Californians' privacy concerns about their energy usage data; and the need to be mindful that demand response programs should be developed to achieve usage reductions at minimum ratepayer cost. Subsequent to the October 15th WG 1 meeting, the draft document was revised to address these concerns, as well as other issues noted below.

In general, the principals are concerned that their agencies arrive, as soon as possible, at an explicit policy agreement that will optimize demand response as one of many different parts of the overall effort to meet California's future energy needs (WS-3 RT 213:2; 226:1-14; 241:12). There is still some disagreement as to how to get there. For example, Commissioner Rosenfeld articulated a demand response target of 10 percent of peak demand for 50 hours of summer (WS-3 RT 215:4 – 217:11). Commissioner Peevey also expressed the view that we ought to pick dates and have explicit targets as we move forward (WS-3 RT 233:24). However, there is some agreement that targets alone will not effectively

[2] See generally the discussion at the October 15, 2002 WG 1 meeting found in the Reporter's Transcript at WS-3 RT 203:15 – 235:24. The staff draft document dated October 15, 2002, and circulated to attendees of the WG 1 meeting, is attached to this Ruling as Item 2.

motivate utilities to push demand response programs (WS-3 RT 229:9-26). While this may be true, we believe the articulation of interagency goals is the best way of making progress to optimize demand response as an element of a portfolio of reserves to serve load reliably at least cost. Naturally these targets can be revised if they prove to be too expensive or other drivers portend a different outcome, but without the targets in place we stand little chance of removing obstacles that impede our progress in optimizing demand response.

We seek comment on the updated interagency Vision document.[3] And, in particular, we direct the attention of commenters to the preamble statement which notes that the document should not be interpreted as prejudging the outcome of analysis and recommendations delivered by the working groups to the policy makers in this proceeding. At this point, it is merely a guide from policymakers.

IT IS RULED that on or before November 8, 2002 parties who wish to do so shall file and serve comments addressing the latest version of the document entitled "California Demand Response: A Vision for the Future (2002-2007)," which is attached to this ruling as Item 3.

Dated October 29, 2002, at San Francisco, California.

/s/ LYNN T. CAREW
Lynn T. Carew

[3] The updated document, dated October 22, is attached to this Ruling as Item 3.

Administrative Law Judge

Item 1

Agenda for Third "Policy Group" Meeting in R.02-06-001
October 15, 2002, 9:30 a.m.
In San Francisco, CPUC Auditorium

Each agenda item will begin with a brief presentation, followed by reaction/discussion by interagency group of "principals," and then comments from attendees

1. **California Demand Response: A Vision for the Future**
- Report from staff on status of draft interagency vision statement
- Next steps

2. **Cost Recovery Issues**
- Moving beyond "revenue neutrality" to broader issues of cost recovery

3. **Implementation Issues of Concern to Respondents**

Presentation / discussion from utilities about:
- Benefits / opportunities of rolling out dynamic pricing tariffs, demand response programs or pilots, and / or advanced interval meters
- Revenue neutrality concerns
- Implementation issues (e.g., billing systems, lead-times required, etc.)
- Other issues

CALIFORNIA DEMAND RESPONSE: A VISION FOR THE FUTURE (2007)

Joint statement for consideration by the California Energy Commission, Public Utilities Commission, and Consumer Power and Conservation Financing Authority

This vision is intended as a starting point, and should not be interpreted as prejudging the outcome of analysis and recommendations delivered by the working groups to the policymakers in this proceeding. Further, we presume that all statements outlined below depend on an analysis of their overall societal cost-effectiveness.

Definition

DEMAND RESPONSE[1] is defined as the ability of an individual electric customer to reduce usage in a given time period, or shift that usage to another time period, in response to a price signal or a financial incentive.

Vision

No later than 2007, all California electric consumers should have the ability, if they choose, to increase the value derived from their electricity expenditures by adjusting usage in response to price signals.

---

[1] We define demand response for purposes of R.02-06-001 only. To be technically correct, the proper term should be "price-responsive demand," which is a subset of demand response, as is load curtailment. We use the more common term "demand response" here for convenience and ease of reference, though readers may substitute "price-responsive demand" appropriately throughout.

Objectives

Reliability

- Demand response can offset the need for investment in generation, transmission, and/or distribution
- Demand response should achieve at least a 5% reduction in peak demand
- Cost-effective demand response can be used to meet reserve requirements: a target of 25% of required reserves is reasonable
- Numerous and diverse customers voluntarily reducing or shifting their demand in response to economic signals is preferable to controlled outages during power system emergency situations

Lower power costs

- During high-cost periods, demand response can assist in bringing supply and demand into balance by signaling to the consumer the actual costs of buying power at the margin and/or investing in new power resources, lowering overall wholesale electricity costs for all customers
- Demand response can, along with other wholesale market measures, help mitigate wholesale market power and ensure reasonable prices
- A long-term objective is continuing to move toward setting rates at the marginal cost of providing electricity service

Environmental protection

- Reducing consumer electricity usage during peak periods can help reduce fuel use and therefore overall air emissions by reducing output from marginal generation units
- The agencies' definition of demand response does not include or encourage switching to use of fossil-fueled emergency backup generation; this policy does not refer to high-efficiency, clean distributed generation used to supply on-site baseload or intermediate loads

Goals and Principles

Customer Service

- Electric consumers in California should be made aware of the time-variable nature of electricity costs and of general steps they can take to help lower those costs

- All customers that desire it and are willing to pay for it should have greater access to information about their own electricity use, at least weekly or daily, with the option for hourly or more frequent data
- Technologies to enable demand response may also provide other customer service benefits including outage detection and management, power quality management, and other information capabilities

Optionality

- Customers should have the ability to choose among various tariff options, including:
  - Very large customers (over 1 MW): Hourly real-time pricing (RTP), critical peak pricing (CPP), or Time-of-Use (TOU) Pricing
  - Large customers (200 kW to 1 MW): CPP, TOU or RTP
  - Residential and small commercial customers (under 200 kW): CPP, TOU or flat rate (the latter with an appropriate hedge for risk protection)
- Customers should also have the option to participate in programs where they are paid to provide demand reduction as a dispatchable resource, including:
  - In ISO markets: real-time, hour ahead, day ahead, ancillary services, planning reserves
  - In retail markets: such programs as direct load control, including air-conditioner or water pump cycling, and controllable thermostats

Technologies

- All customers should have access to an advanced metering system capable of supporting a TOU tariff or better, with minimal hardware upgrades necessary to choose among various dynamic tariffs
- All customers who choose to should be able to conveniently access their usage information using communications media (e.g., over the internet, via on-site devices, or other means chosen by the customer)
- The broadest possible range of metering and communications technologies that can enable demand response should be encouraged (i.e., optionality), but all technologies should be compatible with utility billing and other back-office systems
- State building code (Title 24) updates provide a cost-effective opportunity to introduce demand response technologies during the construction of new buildings or renovation of existing buildings

Investor-Owned Utility (IOU) Issues

- IOUs should be reimbursed for all reasonable expenditures on infrastructure and administration to enable demand response
- IOUs should be required to procure demand response resources as a portion of their overall procurement portfolio (minimum of 5% by 2007) with a minimum of 25% of the IOUs' secured reserves beginning in 2004; IOUs should also be provided an incentive mechanism to make the best choices for ratepayers
- Operation of an IOU's overall demand response portfolio should be designed to be revenue neutral (costs decline with revenues), with periodic true-ups as necessary

Timeframe

2003: Proof-of-concept phase

- Policy decision including vision and implementation plan
- Dynamic pricing as a full program option to customers with advanced meters in place (>200 kW)
- Pilot programs implemented to gather further information on smaller customer response and issues
- Business cases for phased implementation of universal demand response capability (potentially with automated meter reading technology) developed and evaluated, including cost-effectiveness analysis

2004: Phased implementation begins

- Full menu of demand response programs and dynamic pricing tariffs implemented for large and very large customers
- Small commercial and residential pilot program information evaluated
- Vision and timeframe reevaluated
- Small and medium commercial customer implementation phase begins

2005 and 2006: Residential implementation

- Major mass-market education effort initiated
- Full menu of options rolled out to residential customers over two years

CALIFORNIA DEMAND RESPONSE: A VISION FOR THE FUTURE (2002-2007)

Joint statement for consideration by the California Energy Commission, Public Utilities Commission, and Consumer Power and Conservation Financing Authority

This vision is intended as a broad statement for encouraging demand responsiveness in California. It should be read in the context of maximizing the efficient use of resources, while maintaining the economic vitality of businesses in the state, as well as the health, welfare, and comfort of residential electricity users.

We acknowledge that demand response is one resource among many that may be procured by utilities on behalf of their electricity customers. We also seek to make the most cost-effective investments in demand response from an overall societal perspective.

Finally, this vision is intended as a starting point, and should not be interpreted as prejudging the outcome of analysis and recommendations delivered by the working groups to the policymakers in this proceeding.[1]

Definition

DEMAND RESPONSE[2] gives an individual electric customer the ability to reduce or adjust their electricity usage in a given time period, or shift that usage to another time period, in response to a price signal or a financial incentive.

---

[1] CPUC rulemaking R.02-06-001 on policies and practices for advanced metering, demand response, and dynamic pricing.

[2] We define demand response for purposes of this proceeding only. To be technically correct, the proper term should be "price-responsive demand," which is a subset of demand response, as is load curtailment. We use the more common term "demand response" here for convenience and ease of reference, though readers may substitute "price-responsive demand" appropriately throughout.

Vision

All California electric consumers should have the ability to increase the value derived from their electricity expenditures by choosing to adjust usage in response to price signals, by no later than 2007.

Objectives

Reliability

- Timely demand response (within minutes or hours) from customers can offset the need for investment in generation, transmission, and/or distribution
- Demand response activities should be designed to achieve a target of 5% reduction in peak demand by 2007
- Cost-effective demand response can be used to meet reserve requirements: a target of 20% of required reserves is reasonable by 2004
- Numerous and diverse customers voluntarily reducing or shifting their demand in response to economic signals is preferable to controlled outages during power system emergency situations

Lower power costs

- During high-cost periods, demand response can assist in bringing supply and demand into balance by signaling to the consumer the actual costs of buying power at the margin and/or investing in new power resources, thereby lowering overall wholesale electricity costs for all customers
- Timely demand response can, along with other wholesale market measures, help mitigate wholesale market power and ensure reasonable prices
- To encourage demand response, a long-term objective is designing retail rates that dynamically incorporate the marginal cost of providing electricity service
- Demand response activities should be designed to be cost-effective from a societal perspective

Environmental protection

- Reducing consumer electricity usage during peak periods can help reduce fuel use and therefore overall air emissions by reducing output from marginal generation units
- The agencies' definition of demand response does <u>not</u> include or encourage switching to use of fossil-fueled emergency backup generation, but high-efficiency, clean distributed generation may be used to supply on-site loads

Goals and Principles

Customer Service

- Electric consumers in California should be made aware of the time-variable nature of electricity costs and of general steps they can take to help lower those costs
- All customers that desire it and are willing to pay for it should have greater access to information about their own electricity use, at least weekly or daily, with the option for hourly or more frequent data
- Technologies to enable demand response may also provide other customer service benefits including outage detection and management, power quality management, and other information capabilities

Optionality

- Customers should have the ability to choose among various tariff options, including:
  - Very large customers (over 1 MW): Hourly real-time pricing (RTP), critical peak pricing (CPP), or Time-of-Use (TOU) Pricing
  - Large customers (200 kW to 1 MW): CPP, TOU or RTP
  - Residential and small commercial customers (under 200 kW): CPP, TOU or flat rate (the latter with an appropriate hedge for risk protection)
- Customers should also have the option to participate in programs where they are paid to provide demand reduction as a dispatchable resource, including:
  - In ISO markets: real-time, hour ahead, day ahead, ancillary services, planning reserves
  - In retail markets: such programs as direct load control, including air-conditioner or water pump cycling, and controllable thermostats

Technologies

- All customers should be provided an advanced metering system capable of supporting a TOU tariff or better, with minimal hardware upgrades necessary to choose among various dynamic tariffs
- All customers who choose to should be able to conveniently access their usage information using communications media (e.g., over the internet, via on-site devices, or other means chosen by the customer and respectful of potential privacy concerns)

- The broadest possible range of metering and communications technologies that can enable demand response should be encouraged (i.e., optionality), but all technologies should be compatible with utility billing and other back-office systems
- State building code (Title 24) updates provide a cost-effective opportunity to introduce demand response technologies during the construction of new buildings or renovation of existing buildings

Investor-Owned Utility (IOU) Issues

- IOUs should be reimbursed for all reasonable expenditures on infrastructure and administration to enable demand response
- IOUs should be required to procure demand response resources as a portion of their overall procurement portfolio (target of 5% of peak demand by 2007) targeting 20% of the IOUs' secured reserves beginning in 2004; IOUs should also be provided an incentive mechanism to encourage the best choices for ratepayers
- Operation of an IOU's overall demand response portfolio should be designed to be revenue neutral to the IOU (e.g., revenues stay consistent with costs), with periodic true-ups as necessary

Timeframe

2003: Proof-of-concept phase

- Policy decision including vision and implementation plan
- Dynamic pricing as a full program option to customers with advanced meters in place (>200 kW)
- Pilot programs implemented to gather further information on smaller customer demand response and tariff or program preferences
- Business cases for phased implementation of universal demand response capability (potentially with automated meter reading technology) developed and evaluated, including cost-effectiveness analysis

2004: Phased implementation begins

- Full menu of demand response programs and dynamic pricing tariffs implemented for large and very large customers
- Small commercial and residential pilot program information evaluated
- Vision and timeframe reevaluated
- Small and medium commercial customer infrastructure deployment phase begins

2005 and 2006: Residential implementation

- Major mass-market education effort initiated
- Full menu of tariff and program options rolled out to residential customers by the end of 2006

CERTIFICATE OF SERVICE

I certify that I have by U.S. mail, and by electronic mail to the parties to which an electronic mail address has been provided, this day served a true copy of the original attached Administrative Law Judge's Ruling Seeking Comment on Vision Statement on all parties of record in this proceeding or their attorneys of record.

Dated October 29, 2002, at San Francisco, California.

/s/ JANET V. ALVIAR
Janet V. Alviar

N O T I C E

Parties should notify the Process Office, Public Utilities Commission, 505 Van Ness Avenue, Room 2000, San Francisco, CA 94102, of any change of address to ensure that they continue to receive documents. You must indicate the proceeding number on the service list on which your name appears.